

## CLAIMS

1. A station for receiving a message from an interconnected station on the input side and transmitting message information relating to the received message to an interconnected station on the output side, comprising

congestion control means composed of congestion detection means for detecting the occurrence of congestion in the interconnected station on the output side and response means for responding by delaying for a prescribed time the response to the request to receive and accept said message from the interconnected station on the input side when the occurrence of congestion is detected by said congestion detection means.

2. The station according to claim 1, wherein said prescribed delay time is a time obtained by dividing an average response time from the interconnected station on the output side by a session number in the interconnected station on the output side that is multiplied by a margin ratio.

3. The station according to claim 1, wherein said congestion control means has switching means for switching said message information of the session in which the congestion has occurred to another session when the occurrence of congestion is detected in said congestion detection means.

4. The station according to claim 3, wherein when there are a plurality of interconnected stations on the output side and the congestion has occurred or a closed state has been assumed in all the sessions to a specific interconnected station on the output side, said switching means distributes and sends said message information to other interconnected stations on the output side.

5. The station according to claim 1, wherein said congestion detection means detects that congestion has occurred in the interconnected station on the output side when an error indicating congestion is returned from the interconnected station on the output side in response to a request to transfer said message information to the interconnected station on the output side.

6. The station according to claim 1, wherein said congestion detection means detects that congestion has occurred in the interconnected station on the output side from a parameter representing a congested state in the response from the interconnected station on the output side to a request to transfer said message information to the interconnected station

on the output side, this parameter being contained in said response.

7. The station according to claim 1, wherein said congestion detection means detects that congestion has occurred in the interconnected station on the output side when the average response time in a plurality of the latest responses has reached  $m$  times (where  $m > 1$ ) of the average response time in the normal state, in the response from the interconnected station on the output side to a request to transfer said message information to the interconnected station on the output side.

8. The station according to claim 1, wherein said congestion detection means has issuance means for issuing a circuit state verification request with a prescribed period with respect to a session in the interconnected station on the output side that has been detected to be in a congested state by said congestion control means, and said congestion detection means detects that a congested state in the session has been eliminated when the average response time in a plurality of the latest responses to the issued requests from said issuance means has become equal to or less than the average response time in the normal state.

9. A station for receiving a message from an interconnected station on the input side and transmitting message information relating to the received message to an interconnected station on the output side, comprising

congestion control means composed of congestion detection means which detects the occurrence of congestion in the own station when the filling ratio in a buffer memory that stores said messages or received requests that have not been completely processed exceeds a prescribed filling ratio, and response means for responding by delaying for a prescribed time the response to the request to receive and accept said message from the interconnected station on the input side when the occurrence of congestion in the own station is detected in said congestion detection means.

10. The station according to claim 9, wherein said prescribed delay time is a time obtained by dividing an average response time from the interconnected station on the output side by a session number in the interconnected station on the output side that is multiplied by a margin ratio.

11. The station according to claim 9, wherein said congestion control means allows for the detection of congestion occurrence in the interconnected station on the output side and

has switching means for switching said message information of the session in which the congestion has occurred to another session when the occurrence of congestion in the interconnected station on the output side is detected by said congestion detection means.

12. The station according to claim 11, wherein when there are a plurality of interconnected stations on the output side and congestion has occurred or a closed state has been assumed in all the sessions to a specific interconnected station on the output side, said switching means distributes and sends said message information to other interconnected stations on the output side.

13. The station according to claim 9, wherein said congestion detection means detects that congestion has occurred in the interconnected station on the output side when an error indicating congestion has been returned from the interconnected station on the output side in response to a request to transfer said message information to the interconnected station on the output side.

14. The station according to claim 9, wherein said congestion detection means detects that congestion has occurred in the interconnected station on the output side from a parameter representing a congested state in the response from the

interconnected station on the output side to a request to transfer said message information to the interconnected station on the output side, this parameter being contained in said response.

15. The station according to claim 9, wherein said congestion detection means detects that congestion has occurred in the interconnected station on the output side when the average response time in a plurality of the latest responses has reached  $m$  times (where  $m > 1$ ) of the average response time in the normal state, in the response from the interconnected station on the output side to a request to transfer said message information to the interconnected station on the output side.

16. The station according to claim 9, wherein said congestion detection means has issuance means for issuing a circuit state verification request with a prescribed period with respect to a session in the interconnected station on the output side that has been detected to be in a congested state by said congestion control means, and said congestion detection means detects that a congested state in a session has been eliminated when the average response time in a plurality of the latest responses to the issued requests from said issuance means has

become equal to or less than the average response time in the normal state.